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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/976,959	10/11/2001	Kay-Yut Chen	10018398	3006

22879 7590 11/10/2008

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EXAMINER	
JARRETT, SCOTT L	

ART UNIT	PAPER NUMBER
3624	

NOTIFICATION DATE	DELIVERY MODE
11/10/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	09/976,959	CHEN ET AL.	
	Examiner	Art Unit	
	SCOTT L. JARRETT	3624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 September 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17,19 and 20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17,19 and 20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This Non-Final Office Action in response to the Appeal Brief filed September 17, 2008. Examiner is re-opening prosecution in response to applicant's remarks filed September 17, 2008. Currently Claims 1-17 and 19-20 are pending.

Examiner called Applicant's representative, Mr. John Wagner, on October 30, 2008. A voicemail was left, no response was received.

Response to Arguments

2. Applicant's arguments, see Paragraph 1, Page 16, filed September 17, 2008, with respect to the rejection(s) of claim(s) 1-6, 9-11 and 13-15 under FSM have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Pennock et al., The Power Of Play: Efficiency and Forecast Accuracy in Web Market Games; Kaplan, U.S. Patent No. 7,155,510.

The 35 U.S.C. 112(2) of claims 16-20 in the previous office action is withdrawn in response to Applicant's arguments filed September 17, 2008 (Pages 11-12).

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 1-8, 16-17 and 19-20 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Based on Supreme Court precedent, a method/process claim must (1) be tied to another statutory class of invention (such as a particular apparatus) (see at least Diamond v. Diehr, 450 U.S. 175, 184 (1981); Parker v. Flook, 437 U.S. 584, 588 n.9 (1978); Gottschalk v. Benson, 409 U.S. 63, 70 (1972); Cochrane v. Deener, 94 U.S. 780, 787-88 (1876)) or (2) transform underlying subject matter (such as an article or materials) to a different state or thing (see at least Gottschalk v. Benson, 409 U.S. 63, 71 (1972)).

A method/process claim that fails to meet one of the above requirements is not in compliance with the statutory requirements of 35 U.S.C. 101 for patent eligible subject matter. Here claims 1-8, 16-17 and 19-20 fail to meet the above requirements because they are not tied to another statutory class of invention.

Nominal recitations of structure in an otherwise ineligible method fail to make the method a statutory process. See Benson, 409 U.S. at 71-72. As Comiskey recognized, "the mere use of the machine to collect data necessary for application of the mental process may not make the claim patentable subject matter." Comiskey, 499 F.3d at 1380 (citing In re Grams, 888 F.2d 835, 839-40 (Fed. Cir.1989)). Incidental physical limitations, such as data gathering, field of use limitations, and post-solution activity are

not enough to convert an abstract idea into a statutory process. In other words, nominal or token recitations of structure in a method claim do not convert an otherwise ineligible claim into an eligible one.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1-2, 4-7, 9-11, and 13-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pennock, David M. et al., The Power of Play: Efficiency and Forecast Accuracy in Web Market Games (2001) in view of Kaplan, U.S. Patent No. 7,155,510.

Regarding Claims 1 and 9 Pennock et al. teach a forecasting system and method comprising:

- running an information market including an artificial market in which financial instruments are utilized and traded by information market participants (IEM, HSX, FX; Abstract; Last Paragraph, Page 10; Section 2.2, Pages 5-6);

- extracting (deriving, determining, etc.) participant characteristics through an analysis of trading of the financial instruments (e.g. internal coherence, accuracy, etc; Section 4, Pages 11-12; Paragraph 2, Page 13; Last Paragraph, Page 15; Figures 1-5);

- aggregating of the market results to produce an aggregated probability projection (e.g. forecast) associated with the uncertain situation (Section 4.1, Pages 12-13; Paragraph 1, Page 16; Table 1; Paragraph 1, Page 17).

Pennock et al. further teach a memory, for storing instructions, and a processor for executing the instructions (internet, web sites; Paragraph 2, Page 18).

Pennock et al. does not expressly teach performing a query process in addition to the running of an information market, the query process including posing a predictive query, about a probability of a future outcome associated with an uncertain situation, to the participants and gathering results of the predictive query and aggregating the results of the query process with adjustments for the participant characteristics to produce an aggregated probability projection associated with the uncertain situation as claimed.

Kaplan teach a forecasting system and method further comprising performing a query process in addition to the running of the information market, the query process including posing a predictive query, about a probability of a future outcome (occurrence, event, state, etc.) associated with an uncertain situation, to the participants and gathering results of the predictive query (Column 1, Lines 53-60l Column 6, Lines 5-14; Column 13, Lines 9-25; Column 13, Lines 25-39); and aggregating the results of the query process with adjustments for the participant characteristics (Column 4, Lines 49-53; Column 5, Lines 6-15; Column 6, Lines 44-68; Column 7, Lines 1-20; Column 8, Lines 9-41) to produce an aggregated probability projection (e.g. forecast) associated with the uncertain situation (CPS, CPI; Column 4, Lines 38-62; Column 7, Lines 1-15; Column 8, Lines 43-62; Column 10, Lines 12-30; Figure 2) in an analogous art of

information markets for the purpose of adjusting the aggregated forecast for individual differences in participants (Column 6, Lines 64-68; Column 7, Lines 1-6).

Kaplan further teaches that the information is designed to elicit characteristics of the participants (Column 4, Lines 49-53; Column 5, Lines 6-15; Column 6, Lines 44-68; Column 7, Lines 1-20; Column 8, Lines 9-41).

It would have been obvious for one skilled in the art at the time of the invention that the system and method for forecasting as taught by Pennock et al. would have benefited from posing predictive queries about the probability of future outcomes and adjusting an aggregated probably projection (forecast) associated with an uncertain situation in view of the teachings of Kaplan; the resultant system/method enabling users to account for differences in the participant characteristics in the aggregated forecasts (Kaplan: Column 6, Lines 64-68; Column 7, Lines 1-6).

Further since the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

Regarding Claim 2 Pennock et al. teach a forecasting system and method wherein the information is designed to elicit characteristics of the participants (Last Paragraph, Page 15; Paragraph 2, Page 13).

Regarding Claim 4 Pennock et al. teach a forecasting system and method further comprising different scenarios wherein participants are presented with different information and wherein characteristics include participants ability to identify and respond to quality of the information provided in the information market (Section 2.1.2, Pages 4-5; Section 3.1, Pages 7-8; Section 4.1, Pages 12-13; Section 4.2, Pages 14-16).

Regarding Claim 5 Pennock et al. teach a system and method further comprising correlating the observed behavior to accepted tendencies (e.g. ideal accuracy, internal coherence, put-call parity; Figures 1, 5-7).

Regarding Claims 6 and 13 Pennock et al. teach a forecasting system and method wherein the information market includes an artificial market financial instrument corresponding to a real world state (IEM, HSX, FX; Section 2.2, Pages 5-6; Paragraph 3, Page 5; Paragraph 1, Page 16).

Regarding Claim 7 Pennock et al. does not expressly teach a query process as claimed.

Kaplan et al. teach a forecasting system and method wherein the results of the query process are aggregated by revising apriori probabilities with reports provided by participants and conditioning the reports by the characteristics of the participants (CPS,

CPI; Column 4, Lines 38-62; Column 7, Lines 1-15; Column 8, Lines 43-62; Column 10, Lines 12-30; Figure 2) in an analogous art of information markets for the purpose of adjusting the aggregated forecast for individual differences in participants (Column 6, Lines 64-68; Column 7, Lines 1-6).

It would have been obvious for one skilled in the art at the time of the invention that the system and method for forecasting as taught by Pennock et al. would have benefited from a query process are aggregated by revising apriori probabilities with reports provided by participants and conditioning the reports by the characteristics of the participants in view of the teachings of Kaplan; the resultant system/method enabling users to account for differences in the participant characteristics in the aggregated forecasts (Kaplan: Column 6, Lines 64-68; Column 7, Lines 1-6).

Further since the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

Regarding Claim 10 Pennock et al. teach a forecasting system and method wherein the system is couple to the internet and participants interact with the system via the Internet (Title, Abstract; HSX, FX, IEM; Paragraph 2, Page 18).

Regarding Claim 11 Pennock et al. teach a system and method further comprising: organizing participants; creating a financial instrument; and establishing a mechanism permitting participants to interact with the market (HSX, IEM, FX; Abstract; Paragraphs 2-3, Page 18; Section 2.2, Pages 5-7).

Regarding Claim 14 Pennock et al. teach a forecasting system and method wherein the information market comprises an artificial call market in which securities are traded (Section 3.1, Pages 7-9; Figures 1-2).

Regarding Claim 15 Pennock et al. teach a forecasting system and method further comprising: generating bids and asks at the end of a call round; determining a market price and volume; completing transactions; and beginning another call round (IEM, FX, HSX; Section 2.2, pages 5-7; Section 3.1, Pages 7-9).

Regarding Claim 16 Pennock et al. teach a (new) environment aggregation function analysis process comprising:

- implementing an (experimental) information market including an information market in which financial instruments are traded by information market participants (IEM, HSX, FX; Abstract; Last Paragraph, Page 10; Section 2.2, Pages 5-6);

- developing a (new) predictive aggregation formula (function, equation, expression, etc.) where the function aggregates predictive information related to the

(experimental) information market (Section 4.1, Pages 12-13; Paragraph 1, Page 16; Table 1; Paragraph 1, Page 17);

- the personal characteristics being extracted through an analysis of results of trading the financial instruments)Section 4, Pages 11-12; Paragraph 2, Page 13; Last Paragraph, Page 15; Figures 1-5);

- creating a prediction benchmark representative of a probability conditioned upon all information acts of the information market e.g. ideal accuracy, internal coherence, put-call parity; Figures 1, 5-7);

- defining a measure to compare the (new) formula aggregation formula with the benchmark (internal coherence, accuracy; Paragraph1-2, Page 7; Section 3.1, pages 7-8; Section 4, Page 11; Figures 1, 5, 7-8); and

- comparing the predictive aggregation formula to the prediction benchmark (to determine if the aggregation function is providing beneficial information; accuracty; Section 4, Page 11; Paragraph 21, Page 12; Paragraph 1, Page 15; Table 1; Figures 1, 5, 7-8).

Pennock et al. does not expressly teach developing a (new) predictive aggregation formula with adjustments for personal characteristics of the participants where the function aggregates predictive information related to the (experimental) information market as claimed.

Kaplan teach a forecasting system and method further comprising developing a (new) predictive aggregation formula (function, equation, expression, etc.) with adjustments for personal characteristics of the participants where the function aggregates predictive information related to the (experimental) information market (Column 4, Lines 49-53; Column 5, Lines 6-15; Column 6, Lines 44-68; Column 7, Lines 1-20; Column 8, Lines 9-41) to produce an aggregated probability projection (e.g. forecast) associated with the uncertain situation (CPS, CPI; Column 4, Lines 38-62; Column 7, Lines 1-15; Column 8, Lines 43-62; Column 10, Lines 12-30; Figure 2) in an analogous art of information markets for the purpose of adjusting the aggregated forecast for individual differences in participants (Column 6, Lines 64-68; Column 7, Lines 1-6).

It would have been obvious for one skilled in the art at the time of the invention that the system and method for forecasting as taught by Pennock et al. would have benefited from posing predictive queries about the probability of future outcomes and adjusting an aggregated probably projection (forecast) associated with an uncertain situation in view of the teachings of Kaplan; the resultant system/method enabling users to account for differences in the participant characteristics in the aggregated forecasts (Kaplan: Column 6, Lines 64-68; Column 7, Lines 1-6).

Further since the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it

did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

Regarding Claim 17 Pennock et al. teach a system and method wherein the (new) predictive aggregation formula is utilized in forecasting a process (Abstract; Paragraph 1, Page 17; Conclusion, Page 18).

7. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pennock, David M. et al., The Power of Play: Efficiency and Forecast Accuracy in Web Market Games (2001) in view of Kaplan, U.S. Patent No. 7,155,510 as applied to claims 1-2 above, and further in view of Wolf, Charles et al., The Recovery of Risk Preferences from Actual Choices.

Regarding Claim 3 Pennock et al. teach a forecasting system and method wherein participant characteristics include risk bias (Paragraph 2, Page 13; Paragraph 1, Page 15).

Pennock et al. does not expressly teach that the extracted personal characteristics include participant risk inclination.

Wolf et al. teach extracting personal characteristics include participant risk inclination (aversion; Abstract; Paragraph 2, page 844; Table II, Figure 1) in an analogous art of information markets (trading financial instruments) for the purpose of measuring preferences/characteristics of information market participants and providing insight into predicting participant behavior (Abstract).

Wolf et al. further teaches running an information market to asses risk inclination of participants (Paragraphs 3-4, Page 845; Last Paragraph, Page 848); and querying and collecting risk information from participants (Paragraph 2, Page 845).

It would have been obvious to one skilled in the art at the time of the invention that the forecasting system and method as taught by the combination of Pennock et al. and Kaplan would have benefited from querying participant risk inclination and extracting participant risk inclination in view of the teachings of Wolf et al., since the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

8. Claims 8 and 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pennock, David M. et al., The Power of Play: Efficiency and Forecast Accuracy in Web Market Games (2001) in view of Kaplan, U.S. Patent No. 7,155,510 as applied to claim 1 above, and further in view of Myung, In Jae et al., Maximum Entropy Aggregation of Expert Predictions (1996).

Regarding Claims 8 and 19 Pennock et al. does not expressly teach a query process as claimed.

Kaplan teaches a query process, as discussed above.

Neither Pennock et al. nor Kaplan expressly teach that the results of the query process are aggregated utilizing Bayes formula for each probability of the future outcome occurrence assigned by a participant modified by an exponential factor to condition the probability for adjustments associated with each participant as claimed.

Myung et al. teach that the results of the query process are aggregated utilizing Bayes formula for each probability of the future outcome occurrence assigned by a participant modified by an exponential factor to condition the probability for adjustments associated with each participant (Section 4.1, Page 1432; Equations 2, 3, 6;) in an analogous art of forecasting for the purpose of making adjustments in aggregated

forecasts for participant characteristics (Abstract; Column 2, Last Paragraph, Page 1432; Column 1, Paragraph 1, Page 1420; Column 1, Lines 10-16, Page 1426).

It would have been obvious to one skilled in the art at the time of the invention that the forecasting system and method as taught by the combination of Pennock et al. and Kaplan would have benefited from utilizing Bayes formula for each probability of the future outcome occurrence assigned by a participant modified by an exponential factor to condition the probability for adjustments associated with each participant in view of the teachings of Myung et al.; since the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

9. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pennock, David M. et al., The Power of Play: Efficiency and Forecast Accuracy in Web Market Games (2001) in view of Kaplan, U.S. Patent No. 7,155,510 as applied to claim 9 above, and further in view of Clyman, Dana R., Unreasonable Rationality? (1995).

Regarding Claim 12 Pennock et al. does not expressly teach a forecasting system and method wherein possible information market states are associated with an Arrow-Debreu state security as claimed.

Clyman teaches the well known association of Arrow-Debreu states with information markets (Abstract; Column 2, Paragraphs 2-3, Page 1541; Section 2, Pages 1541-1544; Figures 1-3) in an analogous art of information markets for the purpose of modeling information markets and extract participant risk characteristics.

It would have been obvious to one skilled in the art at the time of the invention that the forecasting system and method as taught by the combination of Pennock et al. and Kaplan would have benefited Arrow-Debreu states in view of the teachings of Clyman, since the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

10. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pennock, David M. et al., The Power of Play: Efficiency and Forecast Accuracy in Web Market Games (2001) in view of Kaplan, U.S. Patent No. 7,155,510 as applied to claims 16-17 above, and further in view of Major, Raymond L. et al., Aggregating Expert Predictions in a networked environment (2001).

Regarding Claim 20 Pennock et al. teach a forecasting system and method wherein the aggregations are compared to a benchmark, more specifically a distance to/from the benchmark (e.g. ideal accuracy, internal coherence, put-call parity; Figures 1, 5-7) as well as comparing several aggregation mechanisms including a non-linear aggregation mechanism (Paragraph 1, Page 16).

Pennock et al. does not expressly teach three aggregation mechanisms are compared to the benchmark using a Kullback-Leibler measure wherein the aggregation mechanisms include a no information prediction aggregation mechanism; a best performing participant aggregation mechanism; and a non-linear aggregation mechanism.

Official notice is taken that utilizing Kullback–Leibler divergence/distance measure (information divergence, information gain, or relative entropy) as a non-commutative measure of the difference between two probability distributions -

specifically from a "true" probability distribution to a "target" probability distribution is old and well known in statistical analysis.

Further official notice is taken that a best performing participant (best expert) as a mechanism for generating a prediction/forecast of a market is old and very well known.

It would have been to one skilled in the art at the time of the invention that the forecasting system and method as taught by the combination of Pennock et al. and Kaplan would have benefited from utilizing any of a plurality of well known statistical and/or mathematically analysis techniques, methods or approaches including but not limited to using a Kullback-Leibler measure in view of the teachings of official notice.

Neither Pennock et al. nor Kaplan expressly teach comparing multiple aggregation mechanism as claimed.

Major et al. teach a system and method comprising comparing multiple aggregation mechanisms (techniques; Last Paragraph, Page 1241; Table 1; Figure 1) comprising a distance measure (Figure 2; Section 2.2.3, Page 1237) a weighted majority aggregation mechanism and a non-linear aggregation mechanism (Section 2.3.2, Page 1239) in an analogous art of producing an aggregated probability projection associated with an uncertain event for the purpose of comparing the accuracy of the aggregation mechanisms to a new aggregation mechanism comprising a composite of the aggregation mechanisms.

It would have been obvious to one skilled in the art at the time of the invention that the forecasting system and method as taught by the combination of Pennock et al. and Kaplan would have benefited from utilizing and comparing any of a plurality of well known aggregation mechanisms in view of the teachings of Major et al., since the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

Examiner's Note

11. The invention, as disclosed in the instant application, is directed to a two-stage method of generating aggregated forecasts for uncertain future events. In the first stage, an information market is run in order to extract risk attitudes from the participants, as well as their ability at predicting a given outcome. This information is used to construct a nonlinear aggregation function that allows for aggregated predictions of uncertain events. In the second stage, individuals are asked to provide forecasts about an uncertain event, and they are rewarded according the accuracy of their forecasts. These individual forecasts are then aggregated using the nonlinear function and used to predict the outcome.

The instant application may disclose patentable subject matter however not all of the disclosed potentially patentable subject matter is recited in the claims. An interview with the examiner may be productive.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Park, WO 01/86532 A1, teach an online system and method for forecasting/predicting uncertain future events comprising the trading of financial instruments in an information market and aggregating results of the participants trading activities to produce a aggregated probability projection associated with the uncertain situation.

- Camerer, Do Biases in Probability Judgment Matter in Markets? (1987), teach the well known study of participant biases in electronic (information) markets wherein participants trade financial instruments.

- Fowler et al., A Bias-Correcting Procedure for Beta Estimation in the Presence of Thin Trading (1989), teaches a new environment aggregation function analysis system and method comprising developing a new predictive aggregation function/formula (estimator) with adjustments for personal characteristics (e.g. bias) of participants in an experimental information market.

- Hanson, Idea Futures (1992), teaches an information (ideas futures) market system and method for aggregating results of the trading of financial instruments in an information market in order to produce an aggregated probability projection (forecast, prediction) of an uncertain situation.

- Forsythe et al., Anatomy of an Experimental Political Stock Market (1992), teaches the well known running of information markets to develop aggregate forecasts

of uncertain future events based on the trading of financial instruments by the participants in the information market. Fortsythe et al. further teaches the study of these markets to study the effect of judgment biases (e.g. participant characteristics affect on the prediction).

- Sunder, Market for Information (1992), teaches the well known running of information markets to extract and account for the personal characteristics (preferences) for participants (traders of financial instruments) in information markets.

- Myung et al., Maximum Entropy Aggregation of Expert Opinions (1996), teach a system and method for generating an aggregated probability project associated with an uncertain event by aggregating queries (questions posed to participants about future events) comprising probabilities of future uncertain events obtained wherein the aggregation accounts for personal characteristics of the participants (experts past performance/predictions) as well as the use multiple aggregation functions including exponential factors, and non-linear aggregation.

- Ortner, Forecasting Markets - An Industrial Application (1997), teach a internet-based information market system and method for forecasting uncertain future events wherein participants trade financial instruments.

- Hanson, Decision markets (1999), teach the well known utilization of information (decision, speculation, electronic, etc.) markets to predict uncertain future events wherein participants trade financial instruments and the market generates an aggregate probability projection (e.g. price) associated with the uncertain situation.

- Jullien et al., Estimating Preferences Under Risk (2000), teach a system and method for eliciting characteristics of participants (traders/bettors) in an information market - specifically participant's risk inclination/attitudes.

- Jackwerth, Recovering Risk Aversion from Option Prices and Realized Returns (2000), teaches the derivation of traders, in information markets, risk inclination formulas (risk aversion functions) through the extraction and analysis of results of the trading of financial instruments.

- Major et al., Aggregating expert predictions in a networked environment (2001), teaches an internet-based system and method for developing a new predictive aggregation formula with adjustments for participants' personal characteristics extracted from participant's behaviors, querying participants for predictions of uncertain events as well as comparing multiple probability aggregation formulas including but not limited to non-linear aggregation techniques.

- Chen et al., Forecasting Uncertain Events with Small Groups (2001), teaches Hewlett Packards' internet system and method for utilizing information markets to produce an aggregated probability projection, adjusted for participant characteristics, of a future uncertain event, wherein market states are associated with well known Arrow-Debreu state security, developing a new predictive aggregation formula with adjustments for personal characteristics of information market participants and comparing three aggregation mechanisms to a Kull-bal-Leibler measure, non-linear, best prediction and exponential factoring. Chen et al. further cite a plurality of prior art

references utilized in creating the disclosed information markets and aggregation formulas.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SCOTT L. JARRETT whose telephone number is (571)272-7033. The examiner can normally be reached on Monday-Friday, 8:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bradley Bayat can be reached on (571) 272-6704. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Scott L Jarrett/
Primary Examiner, Art Unit 3624